

REMARKS

Claims 1, 11-13, 23, 29, 34, 41, 47, 67 and 69-75 are amended. Claims 14, 27, 36, 37, 68 and 76-109 are canceled. Claims 110 and 111 are added. Claims 1-13, 15-26, 28-35, 38-67, 69-75, 110 and 111 are in the application for consideration.

The specification is amended to assist the reader. No new matter is added. Entry of the same is requested.

Applicant affirms the election made to prosecute the claims of Group I, namely claims 1-75.

Applicant's independent claims 1, 11, 23, 29, 34, 41, 47 and 67 stand rejected as being obvious over a combination of references which include U.S. Patent No. 6,089,543 to Freerks and U.S. Patent No. 5,223,113 to Kaneko et al.

Independent claim 1 has been amended to recite that the body is sized and shaped to engage with and between a semiconductor substrate processing chamber and a substrate transfer chamber effective to space the processing chamber and transfer chamber away from one another. Claim 1 further recites that the body comprises a substrate passageway having walls at least a portion of which are substantially metallic. Claim 1 also recites that material peripheral of the walls is substantially non-metallic and thermally insulative. Accordingly, claim 1 recites that the body comprises both metallic material as well as non-metallic and thermally insulative

material. Such claim is neither shown nor suggested by the combination of Freerks and Kaneko et al.

Specifically, the Examiner has misinterpreted the Freerks reference and teachings. In particular, col.1, Ins.38-41 refers to a metal insert placed within a slit valve opening. Such is essentially referring to an exemplary apparatus 28, the entirety of which constitutes a metal insert allegedly an improvement over prior art metal inserts at the time of the Freerks patent application filing. See, for example, Freerks reference to a slit valve opening 24 as shown in Fig. 3 and referred to at col.4, Ins.15-20. Further and regardless, the slit valve insert 28 of Freerks is depicted and disclosed as being entirely composed of metal, for example formed of two interlocking metal pieces 29 and 31 (Fig. 6). Further, as received within slit valve openings 24, the inserts 28 of Freerks are not effective to space the processing chamber and transfer chamber away from one another. Fig. 3 clearly shows that the processing chambers would contact the depicted transfer chamber 12.

Regarding Kaneko et al., insulative material standoffs 144 do apparently participate in separating a processing chamber from a transfer chamber, as depicted in Fig. 5. However, it is also clear from Figs. 4 and 5 and the text pertaining thereto that insulating members 144 are comprised 100% of non-metallic, insulative material. The depicted bolts extending therethrough can in no way be considered as constituting a part of Applicant's claim recited "body" in the context of Applicant's claims. Further,

there is no substrate passageway extending through any of the insulating member standoffs 144 in Kaneko et al.

Applicant's claim 1 requires that the body include a combination of a metallic material and a non-metallic and thermally insulative material, and specifically in the manner recited in claim 1. Clearly, Freerks only teaches a 100% metallic insert which does not space the processing chamber and transfer chamber away from one another. Clearly, Kaneko et al. only teaches thermally insulative members 144 composed 100% of insulative material and having no substrate passageway extending therethrough. Applying the teaching of Kaneko et al. to Freerks would result, at best, in forming the entirety of the Freerks inserts 28 to be 100% insulative material. The combination does not in any way teach or suggest to a person of skill in the art to form Applicant's claim recited interfacial structure of both a metallic material and a non-metallic and thermally insulative material, and certainly not in the spatial relationship that such materials are recited in independent claim 1. Accordingly, Applicant's amended claim 1 is not obvious over a combination of Freerks and Kaneko et al., and the rejection should be withdrawn. Action to that end is requested.

Applicant's independent claim 11 stands rejected over a combination of Freerks, Kaneko et al. and U.S. Patent No. 6,045,620 to Tepman et al. Claim 11 has also been amended to recite that the body is sized and shaped effective to space the processing chamber and transfer chamber away from one another. Claim 11 is also amended to include the subject matter of

claim 14 to the body comprising a substantially metallic insert received within the passageway, with the insert defining an insert substrate passageway therethrough and with the sealant channel being received on the substantially metallic insert. Claim 11 also inherently recites that the mass of material from which the body is formed comprises non-metallic and thermally insulative material. Accordingly, claim 11 requires that the body comprise both metallic material and non-metallic and thermally insulative material. The inapplicability and lack of teachings in this regard with respect to Freerks and Kaneko et al. are discussed above and equally apply with respect to claim 11. The inserts upon which the Examiner relies from the Tepman et al. teaching are also understood to be 100% metallic. Accordingly, the Tepman reference does not overcome the deficiencies asserted with respect to Freerks and Kaneko et al. Therefore, the combined references in no way suggest a combination of metallic material and non-metallic and thermally insulative material in a body of an interfacial structure which is effective to space a processing chamber and transfer chamber away from one another. Accordingly for at least these reasons, Applicant's independent claim 11 should be allowed, and action to that end is requested.

Applicant's independent claim 23 stands rejected as being obvious over a combination of Freerks and Kaneko et al. Independent claim 23 has been amended, and recites a combination of metallic material and non-metallic and thermally insulative material. Accordingly, Applicant's

independent claim 23 should be allowed for the reasons asserted above with respect to Applicant's independent claim 1. Action to that end is requested.

Applicant's independent claim 29 stands rejected as being obvious over a combination of Freerks and Kaneko et al. Applicant's claim 29 has been amended, and recites that the interfacial structure body includes a combination of metallic material and non-metallic and thermally insulative material. The inapplicability of the Examiner's cited references, as argued above with respect to Applicant's independent claim 1, applies equally to Applicant's independent claim 29. Accordingly, independent claim 29 should be allowed, and action to that end is requested.

Applicant's independent claim 34 stands rejected as being obvious over a combination of Freerks, Kaneko et al. and Tepman et al. Claim 34 has been amended, and recites that the body comprises a combination of metallic material and non-metallic and thermally insulative material. Claim 34 is further amended to recite that at least some of the load bearing plugs comprise holes extending therethrough which are sized to receive mounting bolts. Apparently, the Examiner relies upon the screws in Tepman et al. as being the equivalent of Applicant's load bearing plugs. This is an error. The screws of Tepman et al. do not constitute a part of the body of its depicted insert, and further do not provide the function of Applicant's claimed and disclosed "load bearing plugs". Further, the Tepman et al. reference does not show plugs which include holes extending therethrough that are sized to receive mounting bolts. For at least these reasons,

Applicant's independent claim 34 should be allowed, and action to that end is requested.

Applicant's independent claims 41 and 47 have been rejected as being obvious over a combination of Freerks, Kaneko et al. and U.S. Patent No. 3,618,919 to Beck. Independent claims 41 and 47 have been amended, and recite that the body of an interfacial structure includes a metallic material and substantially non-metallic and thermally insulative material. The inapplicability of the Freerks and Kaneko et al. references to such is argued above. The cited Beck reference is not in any way seen to overcome the deficiencies of Freerks and Kaneko et al. with respect to a combination of metallic and non-metallic materials, and certainly not in the context of an interfacial structure as recited. Accordingly, the rejection of Applicant's independent claims 41 and 47 over these three references should be withdrawn, and independent claims 41 and 47 allowed. Action to that end is requested.

Applicant's independent claim 67 stands rejected as being obvious over a combination of Freerks and Kaneko et al. Independent claim 67 has been amended, and recites that the interfacial structure body includes a combination of a metallic material and a non-metallic and thermally insulative material in the stated relationships. As argued above, Freerks and Kaneko et al. are lacking with regard to such teaching. Accordingly, the rejection of Applicant's independent claim 67 over these two references should be withdrawn, and claim 67 allowed. Action to that end is requested.

Dependent claims 69-74 have been amended to be consistent with the amendments made to independent claim 67. Dependent claim 75 has been re-written in independent form, and was previously indicated by the Examiner to be allowable if such were so re-written.

Each of Applicant's dependent claims should be allowed as depending from allowable base claims, and for their own recited features which are neither shown nor suggested in the cited art. Action to that end is requested.

Claims 110 and 111 are added, and should be allowed.

The undersigned appreciates the Examiner's discovery of the cited references, and particularly the Kaneko et al. reference, all of which the undersigned was not previously aware. The foregoing amendments and arguments have been made in an earnest attempt to place the application into immediate condition for allowance, and action to that end is requested. If the Examiner's next anticipated action is to be anything other than a Notice of Allowance, the undersigned respectfully requests a telephone interview prior to issuance of any such subsequent action.

Respectfully submitted,

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